

D'YACHENKO, V.P., red.; LUCHKINA, A.N., red.; RUBE, V.A., red.;  
LAUT, V.T., tekhn. red.

[The essential social labor expenditures, costs and  
profitableness] Obshchestvenno neobkhodimye zatraty  
truda, sebestoimost' i rentabel'nost'; materialy. Pod  
red. V.P.D'iachenko. Moskva, Izd-vo AN SSSR, 1963. 422 p.  
(MIRA 16:11)

1. Rasshirennaya sessiya nauchnogo soveta po problemam  
tsenoobrazovaniya. 1 st, 1962. 2. Chlen-korrespondent  
AN SSSR (for D'yachenko).

(Prices)

*D'yachenko, V. S.*

Hereditary changes in sugar beet depending on conditions of growth. V. S. D'yachenko (M. V. Lomonosov State Univ., Moscow). *Izvest. Akad. Nauk S.S.S.R., Ser. Biol.* 1956, No. 3, 50-2.—A 3 year growing of sugar beet on N-P fertilized ground greatly increased the total dry matter in the seed, with increase of cellulose. The use of P-K fertilizer slightly raised the sugar content.

G. M. Kosolapoff

*med L*

D'YACHENKO, V.S., aspirant

Chemical method of determining neck rot in onions. Zashch.  
rast. ot vred. i bol. 3 no.4:53 J1-Ag '58. (MIRA 11:9)

1. Nauchno-issledovatel'skiy institut ovoshchnogo khozyaystva  
Ministerstva sel'skogo khozyaystva RSFSR.  
(Onions--Diseases and pests)

USSR / Cultivated Plants. Potatoes, Vegetables, Melons. M-2

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 6281

Author : Palilov, N. A.; D'yachenko, V. S.

Inst : Scient.-Res. Institute of Vegetable Crops

Title : Biological Reasons Why Onion Leaves Should  
Be Cut at Harvest Time

Orig Pub : V.S., Sad i ogorod, 1958, No 7, 11-12

Abstract : The main losses of onions during storage are caused by neck rot, according to the data collected by the Scientific Research Institute of Vegetable Crops. The causal agent of this disease produces spores on the scales of the bulb. The conidia of the fungus rest in the soil, after the destruction of the bulb. The fungus develops on leaves and penetrates into the bulb when onions are dried in the field

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USSR / Cultivated Plants. Potatoes, Vegetables, Melons. M-2

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 6281

after harvesting. The cutting of leaves at  
harvest time and immediate drying of bulbs  
in desiccators guarantees a sharp decrease in  
the incidence of the disease.

Card 2/2

D'YACHENKO, V. S.: Master Agric Sci (diss) -- "Improving the keeping qualities of the onion under the conditions of the northern belt of the RSFSR". Moscow, 1959. 17 pp (Min Agric USSR, Gor'kiy Agric Inst), 150 copies (KL, No 15, 1959, 118)

PALILOV, N.A.; D'Y ACHENKO, V.S.; Prinimali uchastiye: MEZHVINSKAYA,  
T.B.; ZHARKOV, A.V.

Storability and quality of vegetables grown in flood plains.  
Biokhim.pl.1 ovoshch. no.7:218-223 '62. (MIRA 16:1)

1. Nauchno-issledovatel'skiy institut ovoshchnogo khozyaystva.  
(Vegetables—Storage)

ACC NR: AP6019365

SOURCE CODE: UR/0126/66/021/002/0217/0222

AUTHOR: Palatnik, L. S.; Bronin, S. V.; Ravlik, A. G.; D'yachenko, V. S.

ORG: Kar'kov Polytechnic Institute im. V. I. Lenin (Khar'kovskiy politekhnicheskiy institut)

TITLE: Electronographic and electron microscopic investigation of carbides in iron carbide films/condensed in a vacuum

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 2, 1966, 217-222

TOPIC TAGS: iron compound, carbide, nucleation, electron microscopy, annealing, alloy, metal film

ABSTRACT: Thin film Fe-C alloys were obtained by simultaneous and successive condensation of the components of specimens with variable composition. The effect of preparative conditions on the formation of the carbide phases was studied. Epsilon-carbide was obtained in the multilayered films. When it was vacuum annealed, an irreversible transformation was observed:  $\epsilon\text{Fe}_x\text{C} \rightarrow \chi\text{Fe}_x\text{C}$   $\rightarrow \text{Fe}_3\text{C} + (x-3)\text{Fe}$ .

In multilayered preparations obtained by successive condensation of Fe and C, the formation of cementite passes through the metastable phases: epsilon- $\text{Fe}_x\text{C}$  and chi- $\text{Fe}_x\text{C}$ ; in the bilayered films, as well as in films obtained by the simultaneous condensation of Fe and C, the immediate formation of cementite occurs.

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UDC: 669.11:548.74



L 29220-00

ACC NR: AP6019365

The transition  $\epsilon \rightarrow \chi$  has a polymorphic transformation character and occurs by nucleation and growth of crystal centers of chi-carbide which, during further annealing, is decomposed into cementite and iron. The composition of epsilon- and chi-carbides can be described by the formula  $Fe_4C$ . The authors express their gratitude to A. T. Pugachev and N. I. Gorbenko for aid in photographing the electronograms. Orig. art. has: 2 figures and 1 table. [JPRS]

SUB CODE: 11, 20 / SUBM DATE: 07Apr65 / ORIG REF: 010 / OTH REF: 006

Card 2/2

D'YACHENKO, Vitaliy Vasil'yevich; GRINGAUZ, S., red.; YAKOVLEVA, Ye.,  
~~tekhn. rad.~~

[Ways to narrow the difference between collective farm-cooperative  
property and public property] Puti sblizheniia kolkhosno-kooperativnoi  
sobstvennosti s obshchenarodnoi. Moskva, Moskovskii rabochii, 1959.  
34 p. (MIRA 12:9)

(Collective farms)

D'YACHENKO, P.Ya., inzh.; D'YACHENKO, V.T., inzh.

Study of methods of controlling the heating of wire and strands  
as they are wound by reinforcement-winding machines with  
electromechanical tensioning. Trudy NIIZHB no.27:49-~~47~~  
'62. (MIRA 15:9)  
(Concrete reinforcement) (Prestressed concrete)

9,2571

S/109/61/006/005/026/027  
D201/D303

AUTHORS: Mikaelyan, A.L., Vasil'yev, A.A., and D'yachenko, V.V.

TITLE: Regeneration in ferrite at SHF under the influence of longitudinal pumping

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 5, 1961,  
846 - 849

TEXT: In their previous work (Ref. 1: Vzaimodeystviye magnitostaticeskikh kolebaniy v ferritovom obraztse pri regeneratsii, Ch. I - II, Radiotekhnika i elektronika, 1961, 6, 4, 5, 639, 789) the authors analyzed the phenomena occurring in a magnetized ferrite under the influence of a circularly polarized varying magnetic field having a large amplitude (i.e. the pumping field). The essence of the above phenomena was first determined by H. Suhl (Ref. 2: Theory of ferromagnetic microwave amplifier, J. Appl. Phys., 1957, 28, 11, 1225) and their mechanism reduces to the following: if one excites in the ferrite "magnetostatic" oscillations

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S/109/61/006/005/026/027  
D201/D303

Regeneration in ferrite ...

at frequencies  $\omega_1$  and  $\omega_2$  related to each other by

$$\omega_1 + \omega_2 = \omega_p, \quad (1)$$

where  $\omega_p$  - the pumping field frequency, then losses due to self-oscillations at frequencies  $\omega_1$  and  $\omega_2$  can be compensated for from the energy of the pumping field and, therefore, the pumping field has the role of a source which produces periodical changes in the properties of ferrite. At certain "threshold" magnitudes of the pumping field, at which the losses are compensated for, there begins the generation of oscillations at frequencies  $\omega_1$  and  $\omega_2$ . In Ref. 1 (op.cit.) and Ref. 2 (op.cit.) the only case investigated was when the pumping field was homogeneous and was circularly polarized in the plane perpendicular to the magnetizing axis (type 1, 1, 0). In the present article the authors analyze similar effects in a ferrite sphere under the influence of a pumping field  $h_p$  ori-

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Regeneration in ferrite ...

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ented along the magnetizing field  $H_0^e$  (along the z axis). As in Ref. 1(Op.cit.) a small ferrite sphere is considered, to which the approximations of magnetostatics can be applied. Using the notations of Ref. 1(Op.cit.) and determining the intensity of magnetization from the system of

$$\frac{d\vec{M}}{dt} = -\gamma[\vec{M}\vec{H}], \text{ rot } \vec{H} = 0, \vec{H} = \text{grad } \Psi \quad (2)$$

$$4\pi M_{x1} = \chi_1 \frac{\partial \psi_1}{\partial x} - jk_1 \frac{\partial \psi_1}{\partial y} - \alpha h_p \frac{\partial \psi_2^*}{\partial x} + j\beta h_p \frac{\partial \psi_2^*}{\partial y}, \quad 4\pi M_{y1} = \chi_1 \frac{\partial \psi_1}{\partial y} + jk_1 \frac{\partial \psi_1}{\partial x} - \alpha h_p \frac{\partial \psi_2^*}{\partial y} - j\beta h_p \frac{\partial \psi_2^*}{\partial x} \quad (3)$$

are found, where

$$1 = \frac{\omega_0 \omega_M}{\omega_0^2 - \omega_1^2}; \quad (4)$$

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Regeneration in ferrite ...

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$$k_1 = -\frac{\omega_1 \omega_M}{\omega_0^2 - \omega_1^2}; \quad \alpha = \frac{\gamma \omega_M (\omega_0^2 - \omega_1 \omega_2)}{2(\omega_0^2 - \omega_1^2)(\omega_0^2 - \omega_2^2)}; \quad \beta = \frac{\gamma \omega_M \omega_0 (\omega_2 - \omega_1)}{2(\omega_0^2 - \omega_1^2)(\omega_2^2 - \omega_1^2)} \quad (4)$$

From the relationship  $\text{div } \vec{B} = 0$  and Eqs. (3) the expressions for the potentials of magnetostatic oscillations at frequencies  $\omega_1$  and  $\omega_2$  are found to be

$$\mu_1 \left( \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} \right) \psi_1 + \frac{\partial^2 \psi_1}{\partial z^2} = \alpha h_p \left( \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} \right) \psi_2^*, \quad \mu_2 \left( \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} \right) \psi_2 + \frac{\partial^2 \psi_2}{\partial z^2} = \alpha h_p \left( \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} \right) \psi_1^* \quad (5)$$

All the intermediate steps are neglected and only the final results

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Regeneration in ferrite ...

are given which determine the type of interacting oscillations and the amplitude at the pumping field corresponding to the threshold of generation: 1) Oscillations with zero second index, i.e.

$$2,0,1; 3,0,1; 4,0,1 \quad (6)$$

interact between themselves which is the so-called "degenerate" case. The formula determining the generation threshold of oscillations 2,0,1 is given in

$$\frac{h_p}{\Delta H} \geq 2 \frac{\omega_0^2 + \omega^2}{\omega_0^2 - \omega^2} = \frac{5}{2} \frac{H_0^e - \frac{4}{3}\pi M}{4\pi M} \left(1 + \frac{\omega^2}{\omega_0^2}\right). \quad (7)$$

Its graph is given in Fig. 1 for different values of the external magnetizing fields. 2) The second group of interacting oscillations consists of pairs of

$$3, \bar{1}, 0-3, 1, 1 \quad 4, \bar{1}, 0-4, 1, 1 \quad 4, \bar{2}, 0-4, 2, 1, \quad (8)$$

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D201/D303

Regeneration in ferrite ...

the formula determining the generation threshold of a lower pair of oscillations 3,1,1-3,1,1 has the form of

$$k_2 \geq \frac{(8\mu_1\mu_1^* - 4\mu_1k_1^* - 4k_1\mu_1^* + 27\mu_1^* - k_1^*) (8\mu_2\mu_2^* + 4\mu_2k_2^* + 4\mu_2^*k_2 + 27\mu_2^* + k_2^*)}{[\alpha(4\mu_1 + k_1 - 4\mu_1 + 27) - \beta(4\mu_1 + 1)] [\alpha(4\mu_2 + 4k_2 + 4\mu_2 + 27) - \beta(4\mu_2 + 1)]} \quad (9)$$

The evaluation was made for the condition of every oscillation being at resonance, determined from the relationship

$$k_1 - 27\mu_1 - 4\mu_1^2 + 4\mu_1k_1 - 4 = 0, \quad k_2 + 27\mu_2 + 4\mu_2^2 + 4\mu_2k_2 + 4 = 0. \quad (10)$$

These results for the pair 3,1,0 - 3,1,1 are given as graphs in Fig. 2. There are 2 figures and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: H. Suhl, Theory of ferromagnetic microwaves amplifier, J. Appl. Phys., 1957, 28, 11, 1225; R.T. Denton, A ferromagnetic amplifier using longitudinal pumping, Proc. I.R.E. 1960, 5, 937.

SUBMITTED: June 24, 1960

Card 6/8

42730

S/109/62/007/011/009/012  
D295/D308

9.2571 (also 4205)

AUTHORS: Mikaelyan, A.L. and D'yachenko, V.V.

TITLE: A new type of ferrite magnetostatic amplifier

PERIODICAL: Radiotekhnika i elektronika, v. 7,  
no. 11, 1962, 1966 - 1969

TEXT: The new type of magnetostatic ferrite amplifier proposed is based on the existence, in a small magnetized ferrite sphere subject to circular pumping, of pairs of interacting long-wave oscillations for which the frequencies add up to twice the pumping frequencies (in the simplest case) and the indices of the magnetostatic potentials  $\psi_{n,m,r}$  satisfy the relations  $n_1 = n_2$ ,  $m_1 = m_2 + 2$  and  $r_1 - r_2 = 0, 1, 2, \dots$

The threshold pumping intensity is evaluated for the coupled modes  $2,0 - 2,2$ ;  $3,0 - 3,2$  and  $3,1 - 3,3$ . The threshold can be considerably lowered by suitably choosing the mistuning

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A new type ...

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of uniform precession with the resonator. A plot of the amplitude and frequency of the pumping field as a function of the constant magnetizing field for the  $2,0 - 2,2$  pair shows that, in contrast to other amplifier types, the threshold is practically independent of the field for  $\lambda = 3$  cm. The main amplifier parameters for a pumping frequency of 9370 Mc/s and  $4\pi M_0 = 1700$  G ( $M_0$  is the saturation magnetization) are shown, for various coupled modes, in a table. The table illustrates the fact that the frequency of the oscillations generated differs little from the pumping frequency. The mathematical analysis developed in this brief communication relies on papers by the first author et al. as well as on the well-known papers by H.Suhl and R.L. Walker. There are 1 figure and 1 table.

SUBMITTED: June 15, 1962

\* S/109/61/006/004/014/025; S/109/61/006/005/012/027; S/109/61/006/005/026/027

Card 2/2

40926

S/189/62/000/005/001/006  
D204/D307

5.2410  
AUTHORS:

Panchenkov, G. M., Makarov, A. V., D'yachenko,  
V. Ya., and Moiseyev, V. D.

TITLE:

The viscosity of boron trifluoride

PERIODICAL:

Moscow. Universitet. Vestnik. Seriya II,  
Khimiya, no. 5, 1962, 11-13

TEXT:

The viscosity of  $\text{BF}_3$  ( $\eta_{\text{BF}_3}$ ) was measured to determine its dependence, as such data are necessary for thermodynamical calculations associated with thermal diffusion columns involving gas. The apparatus (Fig. 1) was made of Mo glass and quartz. For a determination, container 2 (20 l) was filled with  $\text{CO}_2$  at atm. pressure, keeping taps 15 - 18 closed; Hg was then pumped into 14 to just cover the top Pt lead (21, 23 and 24 closed). Tap 24 was then opened, and the time of fall of Hg between the upper two leads and 14 was measured (= time required by the  $\text{CO}_2$

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The viscosity of...

drawn in to pass through the capillary 10, 157 mm long and ~0.2 mm i.d., = t). The viscosity was calculated from  $\eta = A(T_1/T_2) t$ , where A is an apparatus constant and  $T_1$  and  $T_2$  are room (22°C) and capillary temperatures respectively. Standard experiments with CO<sub>2</sub> showed A to be 0.724, and  $\eta_{BF_3}$  was then measured analogously between 20 and 700°C. Between 20 and 400°C,  $\eta$  is given by  $(15.9 \pm 0.4) \times 10^{-7} T^{0.821 \pm 0.004} \text{ g x cm}^{-1} \text{ x sec}^{-1}$ . Above 400°C, BF<sub>3</sub> attacked the quartz capillary, and anomalous results were obtained. There are 2 figures and 1 table.

ASSOCIATION: Kafedra fizicheskoy khimii (Department of Physical Chemistry)

SUBMITTED: October 30, 1961

Card 2/2

D'YACHENKO, Vitaliy Vasil'yevich; TRIFONOV, V., red.; KLIMOVA, T.,  
tekhn.red.

[Learn the principles of management] Uchis' khoziaistvovat'.  
Moskva, Gos.izd-vo polit.lit-ry, 1960. 29 p.

(MIRA 13:12)

(Industrial management)

D'YACHENKO, V.V., otv. red.; MAZURKEVICH, M., red.; LEBEDEV, A.,  
tekhn. red.

[Business accounting in industry] Khoziaistvennyi raschet v promyshlennosti; sbornik statei. Leningrad, Gosfinizdat, 1961. 166 p.  
(MIRA 15:5)

(Finance)

D'YACHENKO, V.V.

"Economic effectiveness of capital investments in industry" by  
N.I. Veduta. Reviewed by V.V. D'iachenko. Vop. ekon. no.10:  
126-130 0 '61. (MIRA 14:10)

(Capital investments)  
(Veduta, N.I.)



ALLAKHVERDYAN, D.A., prof.; AMINOV, A.M., doktor ekon. nauk; AGLAS, M.S., prof.; D'YACHENKO, V.V., dots.; ZLOBIN, I.D., prof.; KADYSHEV, L.A., dots.; KARNAUKHOVA, Ye.S., prof.; KOTOV, G.G., prof.; LEVITANUS, I.M., dots.; LIVSHITS, A.L., dots.; LYAPIN, A.P., prof.; MAKAROVA, M.F., prof.; MASLOV, P.P., prof.; SONIN, M.Ya., doktor ekon.nauk; SOROKIN, G.M.; STRUMILIN, S.G., akademik; TUMANOVA, L.V., dots.; TUROVTSEV, V.I., dots.; FIGURNOV, P.K., prof.; MOKHOVA, N.I., dots., red.; SHCHERBAKOVA, V.V., dots., red.; SHVEYTSEV, Ye.K., red.; MURASHOVA, V.A., tekhn. red.

[The economics of socialism] Politicheskaya ekonomiya sotsializma. Izd.2., perer. Moskva, Gos.izd-vo "Vysshaya shkola," 1962. 614 p. (MIRA 16:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Sorokin).  
(Economics) (Communism)

D'YACHENKO, Vitaliy Vasil'yevich; ZAMYATINA, L.V., red.; KOROBova,  
N.D., tekhn. red.

[What the trade-union activist group should know about an  
enterprise's economics] Chto dolzhen znat' profsoiuznyi  
aktiv ob ekonomike predpriiatiia. Moskva, Profizdat, 1964.  
93 p. (Bibliotekha profsoiuznogo aktivista, no.5(77))  
(MIRA 17:3)

ACC NR: AT6022264 SOURCE CODE: UR/0000/66/000/000/0009/0013

AUTHOR: D'yachenko, V. V.; Chaplygin, V. A.

ORG: none

TITLE: Energy methods for investigating characteristics of ruby crystals for lasers

SOURCE: Vsesoyuznaya nauchnaya sessiya: posvyashchennaya Dnyu radio. 22d, 1966.  
Sektsiya kvantovoy elektroniki. Doklady. Moscow, 1966, 9-13

TOPIC TAGS: laser, ruby laser, laser energy, laser optic material; laser pumping,  
laser R and D, laser theory, ruby optic material

ABSTRACT: New methods for determining chromium ion concentration, the effective life-time  $\tau_{21}$ , and the losses in crystal are reported. All methods are based on the measurement of the relative radiant energy change and the threshold pumping energy as functions of various crystal parameters, optical resonant cavity and crystal temperature. Since all measurements are relative, the properties of the light source and the pumping method have no effect on the results. An experimental setup which provided an accuracy of energy measurements to within 3.5% was used. The concentration of chromium ions in ruby was analyzed by determining the gain coefficient per unit length  $g_0$ , which is in turn related to the threshold characteristics.  $g_0$  depends on crystal losses, the reflection coefficient of the exit mirror, the relative change in the

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L 09965-67

ACC NR: AT6022264

threshold energy of pumping, and the duration of the excitation pulse. The threshold characteristics were measured for various reflection coefficients of the mirrors while a constant duration of pumping pulses was maintained. The results were plotted with loss coefficient  $\beta$  as a parameter. The effective lifetime  $\tau_{21}$  was determined in relation to the dependence of the threshold energy on the duration of the excitation pulse. The change in energy was calculated by measuring the threshold values for two values of excitation pulse duration. A plot of lifetime vs energy change was made and subsequently used to calculate lifetime for different types of ruby crystals. The simplest way to calculate losses in ruby is to find the slopes of the curves relating the output energy for the various values of the reflection coefficient  $r_2$  of the exit mirror. The slope may be found by differentiating the expression for the output energy with respect to the parameter  $k$ , which is proportional to the excitation energy, and by making the pulse duration constant. For energy levels sufficiently above the threshold the derivative may be written as

$$\partial U_{\Sigma} / \partial k = \frac{\beta_{\Sigma}}{\beta + \beta_{\Sigma}} (1 - \Delta_{\text{THR}} / n_0) t_H$$

and the slope found as a ratio of  $\frac{\partial U_{12}}{\partial k}$  . Orig. art. has: 3 figures, 4 formulas.

SUB CODE: 20 / SUBM DATE: 11Apr66

L 58980-66 FTD/ENT(1)/SEC(k)-2/ENT(m)/EMP(k)/T/ENT(a) IJR(c) 17/01/66

ACC NR: AT6022265

SOURCE CODE: UR/0000/66/000/000/0014/0017

AUTHOR: Gardash'yan, V. M.; D'yachenko, V. V.; Libin, Yu. V.

ORG: none

TITLE: Problems of investigation and design of pulsed lasers <sup>15</sup>

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966.  
Sektziya kvantovoy elektroniki. Doklady. Moscow, 1966, 14-17

TOPIC TAGS: ruby laser, solid state laser, pulsed laser, laser R and D

ABSTRACT: Various method for enhancing the mean output of ruby lasers and various factors influencing the laser efficiency are briefly discussed. The inside-ruby temperature can be measured as a function of cooling-liquid rate-of-flow and pumping power. The cooling efficiency increases by 2—2.5 times when the rate-of-flow is increased from 10 to 100 lit/min. The cooling efficiency can be enhanced by using a slit cut in the reflector along the ruby rod; this results in doubling the laser output (2 - flashtube pumping). Optimal ruby-rod diameter is 6-8 mm depending on cooling conditions. Rubies with uniformly distributed Cr have been grown in IK AN SSSR; they have a loss of only  $\beta = 0.01$  per cm at an efficiency of 1.2%; they permit increasing the mean output by 1.5—2 times as compared to conventional rubies (0.03—0.04 per cm). Also a cooler water (0C instead of 25C) results in about 50% gain in the mean output. Fastening of the ruby rod and sealing its ends are also discussed, as is a new water-immersed ruby-rod laser design. Orig. art. has: 2 figures and 5 formulas. [03]

Card 1/1 SUB CODE: 20 / SUBM DATE: 11Apr66/ ATD PRESS: 5150

L 41201-43 INT(1) TOP(c) AF

ACC NR: AP6018727

SOURCE CODE: UR/0057/66/036/006/1027/1033

AUTHOR: Golant, V. Ye.; D'yachenko, V.V.; Novik, K.M.; Podushnikova, K. A.

ORG: Physicotechnical Institute im. A.F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiiy institut AN SSSR)

TITLE: Investigation of electron cyclotron heating of plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6, 1966, 1027-1033

TOPIC TAGS: plasma heating, cyclotron resonance, hydrogen plasma, magnetic mirror, plasma electron temperature

ABSTRACT: The authors' experiments on heating plasmas in a magnetic mirror system by supplying energy at the electron cyclotron resonance differed from other such experiments in that separate oscillators were employed to produce the plasmas and to heat them. The plasmas were produced in 9 cm diameter, 18.5 or 30 cm long copper resonators containing hydrogen at from  $5 \times 10^{-6}$  to  $10^{-3}$  mm Hg. The shorter resonator communicated via a 3.5 cm diameter hole in an end wall with a glass tube. The resonator in use was mounted between magnetic mirrors (mirror ratio, 1.8) 30 cm apart. When the shorter resonator was employed, the glass tube was in the region of one of the magnetic mirrors; in all cases the copper resonator was between the mirrors. Approximately 100 W of rf power at 9.3-9.5 kHz was continuously supplied to the

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UDC: 533.9

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ACC NR: AP6018727

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resonator to ionize the gas and 4.12 to 30 microsec pulses of rf power at the same frequency with pulse powers up to 100 kW were employed to heat the plasma. The visible radiation from the plasma was recorded with a photomultiplier, the x radiation from the plasma was recorded with a 0.1 x 3 or a 3 x 3 cm NaI scintillator shielded with 1 cm of lead, and the plasma was probed with 10, 3.3-4, and 0.8 cm wavelength microwave beams. The continuous 100 W excitation at 9.3-9.5 kHz produced plasmas with electron densities of the order of  $10^{12} \text{ cm}^{-3}$  when both magnetic mirrors were operating, and part of the plasma produced in the shorter copper resonator appeared in the portion of the glass side tube that was between the magnetic mirrors. The uhf pulses were strongly absorbed by the plasma; under favorable conditions 30% of the pulse power was absorbed. The maximum energy thus injected into the plasma was 0.2 J. X radiation was observed when the plasma was excited by the powerful uhf pulses. From the absorption curve of the x radiation it was concluded that electrons with energies up to 100 keV were present with a concentration (estimated from the total absorbed energy and the volume of the plasma) of the order of  $10^{10} \text{ cm}^{-3}$ . The x-ray pulse was delayed by some 4-5 microsec with respect to the exciting uhf pulse, and when the uhf pulse duration was less than 5 microsec the x rays did not appear. In view of the fact that plasmas produced during the experiments within the shorter metallic resonator appeared outside the resonator in the glass tube, it is suggested that it may be possible simultaneously to heat both the ions and the electrons of the same plasma

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L 41203-66

ACC NR: AP6018727

2

within a single magnetic mirror system by supplying energy at both the electron and the ion cyclotron frequencies. The authors thank A.D.Piliya and V.Ya.Frenkel for fruitful discussions. Orig. art. has: 1 formula and 9 figures.

SUB CODE: 20/ SUBM DATE: 02Jul65/ ORIG. REF: 004/ OTH REF: 004/

Card 3/3 *mclp*



ACC NR: AT6032626

(A)

SOURCE CODE: UR/0000/66/000/000/0077/0094

AUTHOR: D'yachenko, V. V. (Candidate of technical sciences); Morozov, B. P. (Engineer); Sivov, Ye. N. (Engineer)

ORG: none

TITLE: Fusion welding of dissimilar metals

SOURCE: Moscow. Vyssheye tekhnicheskoye uchilishche. Avtomatizatsiya, mekhanizatsiya i tekhnologiya protsessov svarki (Automation, mechanization and technology of welding processes) Moscow, Izd-vo Mashinostroyeniye, 1966, 77-94

TOPIC TAGS: ~~metal~~ <sup>steel</sup> welding, ~~refractory metal, molybdenum alloy, niobium alloy, stainless steel~~ <sup>refractory metal, molybdenum alloy, niobium alloy, stainless steel</sup>, fusion welding, electron beam welding, TIG welding/TsM-2A molybdenum alloy, VN-2 niobium alloy, lKh18N9T steel

ABSTRACT: Experiments have been made at the Moscow Aviation Technological Institute (MATI) to develop a welding method which would ensure direct joining of a refractory metal to steel by fusing the low-melting metal without fusing (or with minimum fusing) the refractory metal. TsM-2A molybdenum alloy sheets, 0.3—0.5 mm thick, and VN-2 niobium alloy sheets 0.3 mm thick, were welded directly to each other or to lKh18N9T stainless steel sheets 0.4—0.8 mm thick by electron beam or automatic TIG welding in a chamber with a controlled atmosphere. Both these methods were found to be satisfactory for direct welding TsM-2A and VN-2 alloys to lKh18N9T steel.

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ACC NR: AT6032626

The welds made under optimum conditions by fusing only the steel without fusing the refractory metal, had no cracks or pores, were vacuum-tight and had a satisfactory strength and ductility. Satisfactory direct joining of TsM-2A molybdenum alloy to VN2 niobium alloy has been achieved only by electron-beam welding in vacuum. Welds with a satisfactory ductility have been made with minimum fusion of molybdenum, so that the weld metal contained max 10% Mo. Arc-welded joints of these two alloys had a very brittle weld metal with numerous transverse cracks. Lap and butt joints with flanged edges of the metal to be fused are recommended for direct welding of the investigated dissimilar metals. The strength and ductility of the welded joints are determined primarily by the weld metal structure which, in turn, depends on the condition of the metal surface, fitting of the edges, and welding conditions. Electron-beam welded joints are stronger and more ductile than joints arcwelded in a controlled atmosphere. Orig. art. has: 10 figures and 7 tables.

SUB CODE: 13// SUBM DATE: 14May66/ ORIG REF: 003/ OTH REF: 004/

Card 2/2

"APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R000411710012-4

APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R000411710012-4"

135-8-2/19

TITLE: Technological Peculiarities of Welding the Aluminum-Magnesium Alloy "AMr-6T" (Tekhnologicheskiye osobennosti svarki aluminie-vomagniyevogo splava "AMr-6T").

seams and gaps, arc amperage and voltage, electrode diameters, types of welding machines and fixtures. With this technology cracks are avoided in the weld metal as well as in the base metal near the welded seam.

Sheets of "AMr-6T" can be very satisfactorily welded by the argon-arc, spot, or roller-electrode method. Their resistance in static tensile tests at 20-400°C is not less than 90% of that of the base metal.

Chief Engineer of the research institute P.A. Troshin submitted technological recommendations for subject experiments. Engineers N.A. Novosel'tsev, I.K. Kostin, I.A. Gedovius, P.P. Volodin, A.S. Shavlovskiy took part in the work.

The article contains 6 tables, 3 diagrams, and 3 photographs.

ASSOCIATION: "NIAT", "OKB"

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 2/2

D'YACHENKO, V.V., kand.tekhn.nauk; MOROZOV, B.P., inzh.; TYLKINA, M.A.,  
kand.tekhn.nauk; SAVITSKIY, Ye.M., doktor khim.nauk; Prinimali  
uchastiye: VINOKUROV, V.P.; BIRYUKOVA, L.V.

Welding molybdenum with an addition alloying of the weld metal  
by rhenium. Svar.proizv. no.7:1-4 J1 '62. (MIRA 15:12)

1. Moskovskiy aviatsionnyy ~~tehnologicheskiy~~ institut (for  
D'yachenko, Morozov). 2. Institut metallurgii im. A.A.Baykova  
(for Tylkina, Savitskiy).  
(Molybdenum—Welding) (Rhenium)

2. THE SECOND ALL-UNION CONFERENCE ON RHENIUM, V. V.

(29)

The Second All-Union Conference on Rhenium, sponsored by the Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences USSR, and the State Institute of Rare Metals, was held in Moscow 19-21 November 1962. A total of 335 representatives from 83 scientific institutions and industrial establishments participated. Among the reports presented were the following: autoclave extraction of Re from Cu concentrates (A. P. Zelikman and A. A. Peredereyev); Re extraction from the gaseous phase (V. P. Savrayev and N. L. Peysakhov); recovery of Re by sorption and ion interchange (V. I. Bibikova, V. V. Il'ichenko, K. B. Lebedev, G. Sh. Tyurekhodzhaeva, V. V. Yermilov, Ye. S. Raimbekov, and M. I. Filimonov); production of carbonyl Re (A. A. Ginzburg); electrolytic production of high-purity Re and electroplating with Re (Z. M. Sominskaya and A. A. Nikitina); Re coatings on refractory metals produced by thermal dissociation of Re chlorides (A. N. Zelikman and N. V. Baryshnikov); plastic deformation and thermomechanical treatment of Re (V. I. Karavaytsev and Yu. A. Sokolov); growth of Re single crystals and effect of O<sub>2</sub> on their properties (Ye. M. Savitskiy and G. Ye. Chuprikov); Re-Mo, Re-W, and Re-precious-metal alloys (Ye. M. Savitskiy, M. A. Tytkina, and K. B. Povarova); synthesis of Re nitrides, silicides, phosphides, and selenides (G. V. Samsonov, V. A. Obolonchik, and V. S. Neshpor); weldability of Re-Mo and Re-W alloys (V. V. D'yachenko, B. P. Morozov, and G. N. Klobanov); new fields of application for Re and Re alloys (M. A. Tytkina and Ye. M. Savitskiy); and Re-Mo alloy for thermocouples (S. K. Danishevskiy, Yu. A. Kocherzhinskiy, and G. B. Lapp).

[WW]

Tsvetnyye metally, no. 4, Apr 1963, pp 92-93



L 23619-65

AT5002783

The chromium content, were investigated. It was found that the oxidation rate of the base metal was significantly higher than the oxidation rate of the base metal. At 800°C the rate of oxidation increased with increasing temperature. The experiments on beam welding were carried out under the direction of Ye. N. The report has: 3 figures and 2 tables.

None

15Aug64

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 002

Card 2/2



L 14503-66 EWT(1)/EWT(m)/EPF(n)-2/EWG(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c)

ACC NR: AP6003277 MJW/JD/HW/JQ

SOURCE CODE: UR/0135/66/000/001/0002/0004

AUTHOR: D'yachenko, V. V. (Candidate of technical sciences); Sivov, Ye. N. (Engineer);  
Morozov, B. P. (Engineer)

ORG: MATI

TITLE: Welding of molybdenum and niobium with stainless steel

SOURCE: Svarochnoye proizvodstvo, no. 1, 1966, 2-4

TOPIC TAGS: electron beam welding, molybdenum, niobium, stainless steel, structural steel, weld evaluation, arc welding, butt welding

ABSTRACT: The welding of refractory metals (<sup>44,55</sup>Nb, <sup>77</sup>Mo, <sup>77</sup>W) to <sup>27</sup>Fe-<sup>27</sup>Ni- and <sup>27</sup>Co-based constructional steels is complicated by the marked differences in their crystalline structure and thermophysical properties. One of the techniques of surmounting this difficulty is to melt steel without melting the refractory metal. In this connection the authors show that it is possible to obtain welded joints of TsM-2A<sup>27</sup> molybdenum alloy with 1Kh18N9T stainless steel, by means of electron beam welding in a vacuum or arc welding in a controlled (argon) atmosphere so as to fuse steel only (without fusing the refractory metal. The technique best recommended for this purpose is that of butt or lap welding with beading of the edges of the molten metal (steel), and in all cases the weld pool must be displaced by 2/3 diameter in the direction of steel. Fundament-

Card 1/2

UDC: 621.791:669.28:669.293:669.15-194

L 14503-66

ACC NR: AP6003277

ally similar results were obtained when welding joints of <sup>14</sup>VN-2 niobium alloy and <sup>3</sup>1Kh18N9T steel. The optimal welding regimes are: voltages, amperages and welding rates for TsM-2A and steel --16-16.5 v, 9-20 a, 30-40 m/hr; for VN-2 and steel -- 9-16.5 kv, 13-25 a, 30 m/hr. It is found that the strength and plasticity of the welded joints thus produced are chiefly determined by the structure of the weld metal which, in its turn, depends on the state of the surface of the welded metal, the fit of edges and the welding regime. Joints welded by the electron-beam method display a higher strength and plasticity than joints welded by the controlled-atmosphere arc method. Orig. art. has: 5 figures, 4 tables.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 002

Joining of dissimilar metals 18

L 05726-67 FBD/EWT(1)/EEC(k)-2/T/EWP(k) IJP(c) WG/GD

ACC NR: AT6022266

SOURCE CODE: UR/0000/66/000/000/0017/0023

AUTHOR: Gardash'yan, V. M.; Gorbachev, A. A.; D'yachenko, V. V.

ORG: none

TITLE: Efficient supply systems for lasers

SOURCE: Vsesoyuznaya nauchnaya sessiya. posvyashchennaya Dnyu raio. 22d, 1966. Sektsiya kvanovoy elektroniki. Doklady. Moscow, 1966, 17-23

TOPIC TAGS: laser R and D, solid state laser, laser supply

ABSTRACT: A light-weight RC laser supply has an efficiency of only 30--40%; an LC laser supply has an efficiency up to 95% but its weight may reach hundreds kg for a solid-state laser with a pumping energy within 100--1000 j. Hence, new supply circuits that include thyristors are suggested. Essentially, with the thyristor nonconducting (see Fig. 1), the buffer capacitor  $C_b$  is charged.

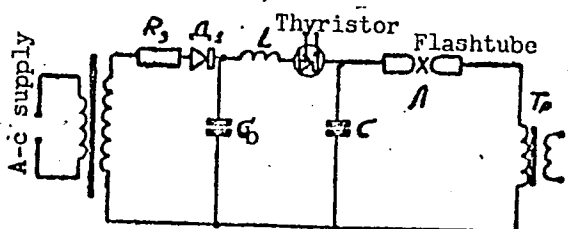


Fig. 1.

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I. 05728-57

ACC NR: AT6022266

Then, a control signal turns on the thyristor, and an oscillatory charging of C takes place. At maximum voltage across C, the thyristor becomes nonconductive again, and a firing pulse is applied to the flashlamp. Next time, the thyristor opens 10-15 msec before the firing pulse is sent. If C charging time is 1 msec, the charging pulse may reach 1000 amp; the coil L will have an inductance of only about 1 mH and a weight, a few kg. Five circuit variants that combine the above principle with voltage multiplication and are intended for 1 or 2 flashlamps are shown. Also an idea of an economical supply circuit based on a capacitor charge reversal (from + U to - U) is offered. Orig. art. has: 7 figures and 5 formulas. [03]

SUB CODE: 20, 09 / SUBM DATE: 11Apr66 / ORIG REF: 003/ ATD PRESS: 5046

Card 2/2 *pls*

ACC NR: AP6027243

SOURCE CODE: UR/0109/66/011/008/1518/1520

AUTHOR: Mikaelyan, A. L.; Ter-Mikayelyan, M. L.; Turkov, Yu. G.; D'yachenko, V. V.

ORG: none

TITLE: Use of quasi-classical and balance equations for calculating stationary conditions in lasers

SOURCE: Radiotekhnika i elektronika, v. 11, no. 8, 1966, 1518-1520

TOPIC TAGS: laser theory, laser R and D

ABSTRACT: The calculation of laser-energy characteristics by the conventional balance method is compared with the calculation by a more rigorous method which takes into account the wave interference in the resonator. In the latter method, the field ... is described by the classical Maxwell equations, and the active atoms, by the Schrodinger equation; two opposing waves are considered in an optical resonator formed by two planar mirrors. Curves of radiation intensity vs. output-mirror reflectivity calculated by the two above methods are shown. At the optimal-reflectivity point, the balance equations have a maximum error (25%). With higher pumping levels and longer specimens, the error diminishes. Orig. art. has: 3 figures and 8 formulas.

SUB CODE: 20 / SUBM DATE: 17Feb66 / ORIG REF: 005

Card 1/1

UDC: 621.378.325.001.24

PANCHENKOV, G.M.; MAKAROV, A.V.; D'YACHENKO, V.Ya.; MOISEYEV, V.D.

Thermal diffusion of  $\text{BF}_3$  under pressure. Vest. Mosk. un. Ser. 2:  
Khim. 18 no.3:33-36 My-Je '63. (MIRA 16:6)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.  
(Boron fluorides) (Boron isotopes)

D'YACHENKO, Ye.A.

For a high level of public health. Zdrav. Ros. Feder. 5 no.7:  
31-33 J1 '61. (MIRA 14:7)

1. Predsedatel' Krasnoyarskogo krayevogo komiteta Obshchestva  
Krasnogo Kresta.  
(KRASNOYARSK TERRITORY--PUBLIC HEALTH)

YAGUPOL'SKII, L.M.; D'YACHENKO, Ye.B.; TROITSKAYA, V.I.

*p*-Trichloromethylmercapto - and *p*-trichloromethoxybenzoic acids  
and their derivatives. Ukr. khim. zhur. 27 no. 1:77-79 '61.  
(MIRA 14:2)

1. Institut organicheskoy khimii AN USSR.  
(Anisic acid) (Benzoic acid)



PESIN, V.G.; KHALETSKIY, A.M.; D'YACHENKO, Ye.K.

Chemistry of 2,1,3-thiodiazole. Part 15: Oxidation  
of benzo-2,1,3-thiodiazole by potassium permanganate.  
Zhur.ob.khim. 32 no.11:3505-3510 N '62. (MIRA 15:11)

1. Leningradskiy khimiko-farmatsevticheskiy institut.  
(Thiadiazole) (Oxidation)

PESIN, V.G.; D'YACHENKO, Ye.K.

Chloromethylation of 2,1,3-benzothiadiazole and its derivatives.  
Zhur. ob. khim. 34 no.7:2475 J1 '64 (MIRA 17:8)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

D'YACHENKO, Ye.P. (Khar'kov, ul.Sumskaya, d.11, kv.12), NALBAT, A.S.

Angioma of the renal pelvis. Nov.khir.arkh. no.2:77-79 Mr-Apr '58  
(MIRA 11:6)

1. Kafedra fakul'tetskoy khirurgii (zav. - prof. A.Z. TSeytlin)  
i kafedra patologicheskoy anatomii (zav. - prof. G.L. Derman)  
Khar'kovskogo meditsinskogo instituta.  
(KIDNEYS--TUMORS)

D'YACHENKO, Yu.S.

Schemes for multiveLOCITY windings of single phase asynchronous  
motors. Trudy MEI no.28:157-169 '56. (MIRA 10:6)  
(Electric meters, Induction)

SOV/110-58-8-17/26

AUTHOR: D'yachenko, Yu.S. (Engineer)

TITLE: Determination of the Parameters of Single-phase Induction Motors (Opredeleniye parametrov odnofaznykh asinkhronnykh dvigateley)

PERIODICAL: Vestnik Elektromyshlennosti, 1958, Nr 8, pp 60-63 (USSR)

ABSTRACT: Two equivalent circuits for the positive and negative phase-sequence currents can be drawn for each winding of a single-phase induction motor. The parameters of these circuits may be determined by calculation or experiments. No-load and short-circuit tests give only two equations with three unknowns. An additional short-circuit test with the rotor extracted gives the third equation. The method proposed to determine the parameters of the equivalent circuits makes it possible to determine the inductive impedance that corresponds to the air-gap flux by means of the following magnitudes; the voltage applied to the terminals of the main motor winding when it is working on no-load under single phase conditions or is driven at synchronous speed by a second motor; the no-load current of the main windings; and the e.m.f. induced in the

Card 1/3

SOV/110-58-8-17/26

Determination of the Parameters of Single-phase Induction Motors

auxiliary winding when disconnected from the circuit. Mathematical expressions for the main parameters of the equivalent circuits are written and are claimed to be reasonably accurate. Some of the necessary measurements give rise to difficulties. The voltage drops in the voltmeter and in the voltage circuit of the wattmeter change the initial e.m.f., particularly if the motor is small. It is then necessary to use a power amplifier in a circuit such as that recommended in Fig 2. The way in which the required constants of the main motor winding are derived from the experimental data is explained. The conduct of particular tests is described and the procedure for determining the parameters of the equivalent circuit is illustrated by a numerical example. It is concluded

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SOV/110-58-8-17/26

Determination of the Parameters of Single-phase Induction Motors

that the differences between the test data and values calculated from equations (13) and (14) are not greater than 3%. A number of practical advantages are claimed for the method.

There are 5 figures and 6 references, 3 of which are Soviet and 3 English.

SUBMITTED: October 17, 1957

1. Induction motors--Circuitis
2. Mathematics--Applications

Card 3/3

D'YACHENKO, Yu.S., Cand Tech Sci -- (diss) "Multispeed  
monophase asynchronous engines." Mos, 1959, 20 pp (Min  
of Higher Education USSR. Mos Order of Lenin Power Engineering  
Inst) 150 copies (KL, 34-59, 113)

- 42 -



SOV/144-59-9-14/15

AUTHOR: D'yachenko, Yu.S., Senior Lecturer

TITLE: Comparison of the Results of an Analytical Method of  
Determining the Starting Torque of a Single-phase Motor  
with Test Measurements

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,  
Elektromekhanika, 1959, Nr 9, pp 103-108 (USSR)

ABSTRACT: Electrically, the starting of an induction motor  
corresponds to a short-circuit. Figs 1 and 2 are the  
equivalent circuits of the main and auxiliary windings,  
while Figs 3 and 4 are the simplified versions used in  
practice. The most general field representation is a  
rotating elliptical field. This may further be regarded  
as the result of two circular fields rotating in opposite  
directions. The turning moment, in synchronous watts, is  
determined by the difference in the electromagnetic  
powers of the direct and inverse rotating fields. Two  
expressions for this power difference  $P_{\Delta k}$  are given  
on p 105 for the cases of capacitor and resistor  
starting. The starting torque in kg.cm. is  
 $M_k = 97.4 P_{\Delta k} / n_c$  where  $n_c$  is the synchronous speed in  
r.p.m. The analytical determination requires that the ✓

Card  
1/2

SOV/144-59-9-14/15

Comparison of the Results of an Analytical Method of Determining  
the Starting Torque of a Single-phase Motor with Test Measurements

stator winding resistances are measured with great accuracy. The motors used for the experiments had numbers of coils which could be variously connected to give different starting arrangements. In Example 1 capacitor starting was used (capacitors of 4 and 6 microfarads); in Example 2 a starting resistor of 155 ohms was used. Tables 1 and 2 list the equivalent circuit values and Table 3 compares the calculated and measured values of starting torque. The agreement is quite good, the error always being less than 10%. There are 4 figures, 3 tables and 7 references, of which 4 are Soviet and 3 English.

ASSOCIATION: Kafedra elektricheskikh mashin i apparatov,  
Novosibirskiy elektrotekhnicheskiy institut  
Card 2/2 (Chair of Electrical Machines and Apparatus,  
Novosibirsk Electrical Engineering Institute) ✓

SUBMITTED: March 11, 1959

SHIROBOVKOV, N.M., general-mayor aviatsii, voyennyy letchik pervogo klassa,  
KUZNETSOV, V.A. polkovnik, voyennyy letchik pervogo klassa,  
POPOV, A.M., polkovnik; VAZHIN, F.A., podpolkovnik; HAZAROV, G.A.,  
mayor, Primali uchastiye: MARKOV, S.I., podpolkovnik, dotsent,  
kand. voyennykh nauk; D'YACHENKO, Yu.T., podpolkovnik, kand.  
voyennykh nauk; D'YACHENKO, G.Kh., mayor sapasa.

Other command posts could also operate this way. Vest.Vozd.Fl.  
no.10:2-21 0 '60. (MIRA 13:11)

(Aerial warfare)

DYACHENKO, Yu.V.

Dynamics of the infections of newborn infants and their mothers  
with pathogenic staphylococci in maternity hospitals. Zhur. mikro-  
biol., epid. i immun. 41 no.12:58-62 D '64.

(MIRA 18:3)

1. Odesskiy institut epidemiologii i mikrobiologii imeni Mechnikova.

Transactions of the Sixth Conference (Cont.)

SOV/6371

71. Gladkov, B. V. Some Problems in the Tabulation of the Beta-Distribution 385
72. D'yachenko, Z. N. Surface of a Gamma-Type Distribution 389
73. Kagan, A. M. Some Properties of the Estimates of Maximum Likelihood 397
74. Chentsov, N. N. On the Asymptotic Effectiveness of an Estimate of Maximum Likelihood (comment on A. M. Kagan's report "Some Properties of the Estimates of Maximum Likelihood") 399
75. Krasulina, T. P. On Stochastic Approximation 403
76. Maniya, G. M. Quadratic Estimation of the Discrepancy of the Densities of a Normal Two-Dimensional Distribution From Sampling Data 407

Transactions of the 6th Conf. on Probability Theory and Mathematical Statistics and of the Symposium on Distributions in Infinite-Dimensional Spaces held in Vil'nyus, 5-10 Sep '60. Vil'nyus Gospolitizdat Lit SSR, 1962. 493 p. 2500 copies printed

D.YACHENKO, Z.N.

One type of a two-dimensional function of gamma-type distribution.  
Nauch.trudy LTA no.94:5-17 '62. (MIRA 16:1)  
(Functions, Gamma)

D'YACHENKO-DZIN, N.K.

Lateral bending of a trapezoidal plate two sides of which  
are rigidly fastened. Trudy Un.druzh.nar. 9 Stroi  
no.2:12-31 '65. (MIRA 18:11)

DYACHIK, I. [Dachik I.]; YAMBRICH, M. [Jambrich, M.], KOVACH, Ya.  
[Kovach, J.]

Some structural changes in polypropylene fibers during formation  
and single-axis deformation at normal and increased temperatures.  
Khim. volok. no.4:2-7 '64. (MIRA 18:4)

1. Issledovatel'skiy institut khimicheskikh volokon, g. Svit,  
Chekhoslovatskaya Sotsialisticheskaya Respublika.



DYACHIN, N.I.

Efficiency measures and inventiveness in the Stalingrad hydroelectric power project. *Biul.stroi.tekh.* 10 no.13:35 Ag '53. (MLRA 6:10)

1. Stalingradgidrostroy. (Stalingrad hydroelectric power station)

*132* *DIACHINA, S. G.* *B-I-2*

PROCESSING AND PROPERTIES INDEX

Extending the length of service of generators. S. G. Diachina  
(Russ. Lett. 1965, 8, 1761). The metal vane is immersed in gas  
oil instead of in H<sub>2</sub>O; corrosion is thereby largely prevented.  
R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROUP	GROUP	GROUP	GROUP
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
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45	46	47	48
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57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

KURBANOV, K.A.; D'YACHISHINA, Y.M.

Gas logging research in exploratory wells. Azerb.neft.khoz.  
35 no.4:1-4 Ap '56. (MLRA 9:10)

(Oil well logging)

D'YACHISHINA-MARTYENKO, A.YE.  
USSR/Virology - Human and Animal Viruses.

E-3

Abs Jour : Ref Zhur - Biol., No 3, 1958, 9693  
Author : D'yachishina-Martynenko, A.YE.  
Inst : -  
Title : An Experiment in Obtaining Dry Fixed Rabies Virus and a  
Study of its Biological Properties.  
Orig Pub : Tr. Odessk. n.-i. in-ta epidemiol. i mikrobiol., 1957, 2,  
67-74  
Abstract : No abstract.

Card 1/1

D'YACHISHINA-MARTYNENKO, A. Ye. Cand Med Sci -- (diss) "Experiment in the obtaining of fixed dry rabies viruses and in the study of their biological properties." Odessa, 1958. 11 pp (Odessa State Med Inst im N. I. Pirogov), 200 copies. (KL 36-58, 115)

-65-

1. D'YACHKIN, I. I., ALEKSEYEVA, YE. I.
2. USSR (600)
4. Nicotine
7. Problem of the synthesis of nicotine in the tobacco plant. Tabak.  
13 no. 5, 1952
9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

PETRENKO, A.G.; D'YACHKIN, I.I.

Changes in the chemical composition and properties of Pomorskaya  
makhorka during fermentation. Izv. vys. ucheb. zav.; pishch. tekhn.  
no. 2:54-58 '58. (MIRA 11:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tabaka i makhorki  
imeni A.I. Mikoyana.

(Tobacco curing)

D'YACHKIN, M.K., starshiy elektromekhanik

Device for identifying wires in electric cables. Avtom., telem. i  
svyaz' 6 no.1:34-35 Ja '62. (MIRA 15:3)

1. Lyublinskaya distantziya signalizatsii i svyazi Moskovskoy  
dorogi.

(Electric cables—Testing)



D'YACHKIN, M.K.

Improved terminal clamp key. Avtom., telem. i svyaz' 8  
no.7:33 J1 '64. (MIRA 17:12)

1. Starshiy elektromekhanik Lyublinakoy distantssi Moskovskoy  
dorogi.

BUROVOY, I.A.; ELIASHBERG, V.M.; D'YACHKO, A.G.; BRYUKVIN, V.A.

Mathematical models of apparatus with fluidized beds for thermo-  
chemical processes. Khim.prom. no.11:756-762 N '61.

(MIRA 15:1)

(Fluidization)

KRICHEVSKIY, G.Ya.; D'YACHKO, A.G.

Mathematical description of the dynamic properties of a furnace  
for fluidized bed roasting of a granulated copper-zinc mixture.  
TSvet.met. 34 no.9:34-42 3 '61. (MIRA 14:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh  
metallov.

(Metallurgical furnaces) (Fluidization)

S/064/62/000/011/001/001  
B101/B186

AUTHORS: Burovoy, I. A., D'yachko, A. G.

TITLE: Mathematical simulators for fluidized bed apparatus to study thermochemical processes

PERIODICAL: Khimicheskaya promyshlennost', no. 11, 1962, 8-13

TEXT: Equations for the rates of adsorption, desorption, and reaction are derived for the heterogeneous chemical reaction in a fluidized bed:  $a_1 A_1 + a_2 A_2 = a_3 A_3 + a_4 A_4$ , where  $A_1$  is the solid, and  $A_2$  is the gaseous initial substance,  $A_3$  is the solid and  $A_4$  the gaseous reaction product, and  $a_1$ ,  $a_2$ ,  $a_3$ , and  $a_4$  are the stoichiometric coefficients.

$$v_a = C_{A_2}^F \sum_{i=1}^n K_{ai}^0 \cdot \theta_{oj} \cdot \exp \left[ - (E_{ai}^0 + \sum_{(j)} \eta_{A_j} \theta_{A_j i}) / RT \right] \quad (11)$$
 holds for the adsorption rate of  $A_2$  with respect to unit surface,  $C_{A_2}^F$  is the

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Mathematical simulators for ...

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concentration of  $A_2$  on the active surface ( $m^{-3}$ );  $K_{ai}^0$  is a factor having the dimension  $m^3/sec$ ;  $E_{ai}^0$  is the activation energy of the free surface;  $\eta_{A_j} = \alpha_j b_{A_j} C_{s\infty}$ , where  $\alpha$  is the change of energy due to adsorption,  $b$  is a coefficient, and  $C_{s\infty}$  is the concentration of the adsorption centers per unit of surface;  $\theta_{A_j,i} = C_{A_j,i}^s / C_{s\infty}$  is the degree of surface occupation by the substance  $A_{j,i}$ , with  $C_{A_j,i}^s$  being the surface concentration of  $A_{j,i}$ .

$v_{di} = \sum_{i=1}^n K_{di}^0 \cdot \theta_{A_{2i}} \cdot \exp \left[ - (E_{di}^0 - \sum_{(j)} \eta_{A_j} \theta_{A_{ji}}) / RT \right]$  (17) holds for the desorption rate of  $A_2$  per unit surface.  $v_r = \sum_{i=1}^n K_{ri}^0 \cdot \theta_{A_{2i}} \cdot \exp(-E_{ri}/RT)$

(22) holds for the total rate of the chemical reaction.  $d\theta_{A_2}/dt = v_a - v_d - v_r$ ,

wherein the values from equations (11), (17), and (22) are to be substituted, holds for the material balance. For the substance  $A_4$ , the Card 2/4

BUROVOY, I.A.; D'YACHKO, A.G.

Mathematical models of apparatus with a fluidized bed  
for thermochemical processes. Khim.prom. no.11:788-793  
N '62. (MIRA 16:2)  
(Fluidization) (Thermochemistry)

BUROVOY, I.A.; ELIASBERG, V.M.; D'YACHKO, A.G.; BRYUKVIN, V.A.

General method of mathematically describing the dynamic properties of fluidized bed apparatuses for thermochemical processes. Sbor. nauch. trud. Gintsvetmeta no.19:550-564 '62. (MIRA 16:7)

(Fluidization--Equipment and supplies)  
(Metallurgical furnaces--Mathematical models)

BUROVOY, I.A.; D'YACHKO, A.G.

Constructing mathematical models of apparatuses for heterogenous  
chemical processes. Sbor. nauch. trud. Gintsvetmeta no.21:  
24-86 '64. (MIRA 18:8)





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it is possible to specify how the rate of the chemical re-

the author considers the adsorption of gaseous reagents on the surface

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ACCESSION NR: AT4047297

... corresponding structural diagrams to ... the dependence  
...  
... heterogeneous reaction ...  
... the dependence of the ...  
...  
... determined. Orig. art. has ...

ASSOCIATION: Gosudarstvennyy Institut (State Institute of Non-Ferrous Metals)

SUBMITTED: 00  
NO REF SOV: 093

ENCL: 00  
OTHER: 011

SUB CODE: GC, TD

Card 3/3

D'YACHKO, A.G.

Constructing mathematical models of continuous processes by  
the results of the investigation of periodic conditions.

Sbor. nauch. trud. Gintsvetmeta no.21:109-130 '64.

(MIRA 18:8)

KRICHEVSKIY, G.Ya.; D'YACHKO, A.G.

More precise mathematical model of roasting a granulated  
copper-zinc charge in a fluidized bed. Sbor. nauch. trud.  
Gintsvetmeta no.21:146-157 '64. (MIRA 18:8)

D'YACHKO, A.Z.

More precise mathematical model of roasting sulfur pyrite  
in a fluidized bed. Sbor. nauch. trud. Gintsvetneta  
no.21:168-173 '64. (MIRA 18:8)

DYACHKO, A.V., tekhnik-normirovshchik

Loading poles onto railroad flatcars. Avtom., telem. i svyaz'.  
4 no.5:37 My '60. (MIRA 13:8)

1. Moskovskiy stroitel'nyy uchastok tresta "Transsignalstroy."  
(Loading and unloading)

PIL'NIK, Petr Lavrent'yevich; LIRNER, Solomon Markovich; DYACHKO, I.P.,  
red.; YEDEL'MAN, N.L., tekhn.red.

[All should be designers] Konstruktory vsi. Kyiv, Kyivs'ke obl.  
knyzhkovo-gazetne vyd-vo, 1960. 14 p.

(MIRA 14:1)

(Technological innovations)



ZAYTSEV, Aleksandr Nikolayevich [Zaitsev, O.]; MEGEDA, Karp Yevtikhiyevich  
[Megeda, K.]; NEVSTRUYEV, Leonid Danilovich; DYACHKO, I.P., red.;  
YADEL'MAN, N.L., tekhn.red.

[Toward our program for 1965] Na rubezhi 1965. Kyiv, Kyivs'ka  
obl.knyzhkovo-gazetne vyd-vo, 1960. 16 p.

(MIRA 14:1)

(Kiev--Railroads--Cars)

POKHODZILO, Petr Vasil'yevich; DYACHKO, I.P., red.; MARTINYUK, K.P.,  
tekhn.red.

[Attention! these are automatic machines] Uvaha! Avtomaty.  
Kyiv, Kyivs'ke obl.knyzhkovo-gazetne vyd-vo, 1960. 18 p.  
(MIRA 14:1)  
(Automatic control)

44897

S/076/63/037/001/020/029  
B101/B186

5.4220

AUTHORS: Davydov, V. I., D'yachko, V. G.

TITLE: The formation of certain volatile germanium compounds at high temperatures

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 1, 1963, 193 - 196

TEXT: The volatilization of germanium due to the formation of  $\text{GeO}$  and of sulfides and chlorides is investigated.  $\text{GeO}_2$  was heated with C, FeS, or  $\text{CaCl}_2$  in a dry air current at  $1030 - 1070^\circ\text{C}$  and the amount of sublimed Ge was determined gravimetrically. Metallic germanium was heated with FeS or  $\text{CaCl}_2$  at  $940 - 1000^\circ\text{C}$  and the sublimation was determined likewise. Results: (1) In the presence of C the rates of formation for  $\text{GeO}$ ,  $\text{GeS}$ ,  $\text{GeS}_2$  and  $\text{GeCl}_4$  from  $\text{GeO}_2$  are almost equal:  $\sim 45 - 55\%$  sublimation in 30 min at  $1030^\circ\text{C}$ ,  $\sim 65 - 75\%$  at  $1070^\circ\text{C}$  in 30 min. (2) In an oxidizing atmosphere the formation rate of sulfides and  $\text{GeCl}_4$  is much smaller than in the presence of a reducing agent. (3) In metallic Ge  $\sim 45\%$  sublimed as  $\text{GeCl}_4$ ,  $\sim 70\%$  as  $\text{GeO}$ ,  $85 - 90\%$  Card 1/2

The formation of certain...

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as  $\text{GeS}_2$  within 30 min at temperatures varying from 930 to 1000°C. These results are consistent with the probabilities for the reactions calculated by the thermodynamic equation for the free enthalpy:  $\Delta Z_T = \Delta H_{298} - T \cdot \Delta S_{298}$ . There are 4 figures and 2 tables.

ASSOCIATION: Chelyabinskiy sovmarkhoz Nauchno-issledovatel'skiy institut metallurgii (Chelyabinsk sovmarkhoz Scientific Research Institute of Metallurgy)

SUBMITTED: October 31, 1961

Card 2/2

DYACHKOV, A.

New vibration mill. Prom.kocz. no.2:30 Ag '57. (MLA 10:9)  
(Milling machinery)

D'YACHKOV, A.B.

Recent karst in some regions of central Kazakhstan and its  
significance from the viewpoint of engineering geology.  
Trudy VSEGINGEO no. 1:24-26 '63. (MIRA 17:5)

D'YACHKOV, A.B.

Silification and karst in the Upper Devonian and Lower Carboniferous carbonate rocks of central Kazakhstan. Izv. vys. ucheb. zav.; geol. i razv. 8 no.9:34-41 S '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii.

D'YACHKOV, A. I.

D'YACHKOV, A. I.: "Training and teaching deaf and dumb children(historical-pedagogical investigation)." Min Education RSFSR. Moscow State Pedagogical Inst imeni V. I. Lenin. Moscow, 1956. (Dissertation for the Degree of Doctor in Pedagogical Science.)

Knizhnaya Letopis'  
No 32, 1956. Moscow.



D'YACHKOV, A.I.

Moldavian S.S.R. Prom.koop. no.1:12-13 '57.

(MLRA 10:4)

1. Predsedatel' pravleniya Moldpromsoвета.  
(Moldavia--Cooperative societies)

*D.YACHKOV, A.I.*  
D'YACHKOV, A.I.; NEYMAN, L.V.

Professor Fedor Andreevich Rau. Vest.oto-rin. 19 no.6:118 H-D '57  
(RAY, FEDOR ANDREEVICH, 1868-1957) (MIRA 11:3)

D'YACHKOV, A.I., red.; LUBOVSKIY, V.I., red.; RUMYANTSEVA, I.P., red.;  
LAUT, V.G., tekhn.red.

[Transactions of the Second Session on Defectology. Moscow,  
1958] Trudy Vtoroi nauchnoi sessii po defektologii. Pod red.  
A.I.D'iachkova i V.I.Lubovskogo. Moskva, Izd-vo Akad.pedagog.  
nauk RSFSR, 1959. 211 p. (MIRA 13:7)

1. Vtoraya nauchnaya sessiya po defektologii. Moscow, 1958.
2. Institut defektologii Akademii pedagogicheskikh nauk RSFSR  
(for D'yachkov).  
(Handicapped children)  
(Children, Abnormal and backward)

D'YACHKOV, A. I.; RAU, F. F.; TEMKIN, Ya. S.; FILIPPOV, M. M.

Doctor of medical sciences Lev Vladimirovich Neiman; on his 60th  
birthday. Vest. otorin. no.3:111-112 '62. (MIRA 15:6)

(NEIMAN, LEV VLADIMIROVICH, 1902-)